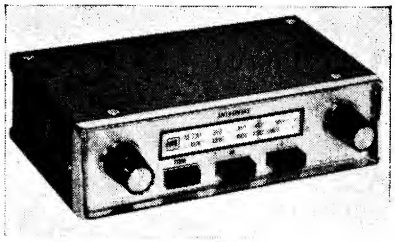
ERT SERVICE CHART 1590 New Series

ANTIFERENCE MODEL 1303 CAR RADIO



Antiference 1303 is a compact easy-to-fit two-band car radio which comes complete with 6 x 4in. speaker and universal fitting kit. Special tailored kits are also available. Twelve-month guarantee covers parts and labour

Additional copies of this chart price 1s. 6d. post free. Payment with order please to ERT, 40 Bowling Green Lane, London EC1

MANUALLY-TUNED two-waveband transistor car radio with push-button wavechange and push-button tone control. Suitable for 12V DC systems with positive or negative earth.

Wavebands. MW 187-578m (1600-520kc/s), LW 1200-2000m (250-150kc/s).

Transistors. TR1 AF117 mixer/oscillator. TR2 AF117 IF amplifier, TR3 AC128 audio driver, TR4 AD149 output.

Diodes. D1 OA79 AGC overload, D2 OA70 detector.

Pilot lamp. 14V 0.75W LES.

Power Supply. 12V DC (switchable for positive or negative earth).

Consumption. 610mA at 14.5V.

IF. 480kc/s.

Aerial input. Socket for standard car aerial plug.

Speaker. 6 x 4in. 5ohm elliptical.

Output. 3W.

Dimensions. 7in. wide, 3⅜in. deep, 2in. high.

Weight. 2lb.

Manufacturer. Antiference Ltd., Bicester Road, Aylesbury, Bucks.

Service departments. Amalgamated Electric Services Ltd., Waddon Factory Estate, Croydon, CR9 4DR, Surrey. Tel.: spare parts orders 01-686-7311, general service enquiries 01-688-7722. After-hours recorded message service on both numbers. Service depots at Birmingham, Bristol, Hamilton, St. Helens, Leeds, Newcastle-upon-Tyne and Nottingham.

INSTALLATION

IMPORTANT. Receiver is supplied adjusted for positive earth supply. For negative earth systems turn polarity switch on base of receiver clockwise.

Ensure receiver polarity is adjusted to that of the vehicle. Never switch on the receiver with speaker disconnected.

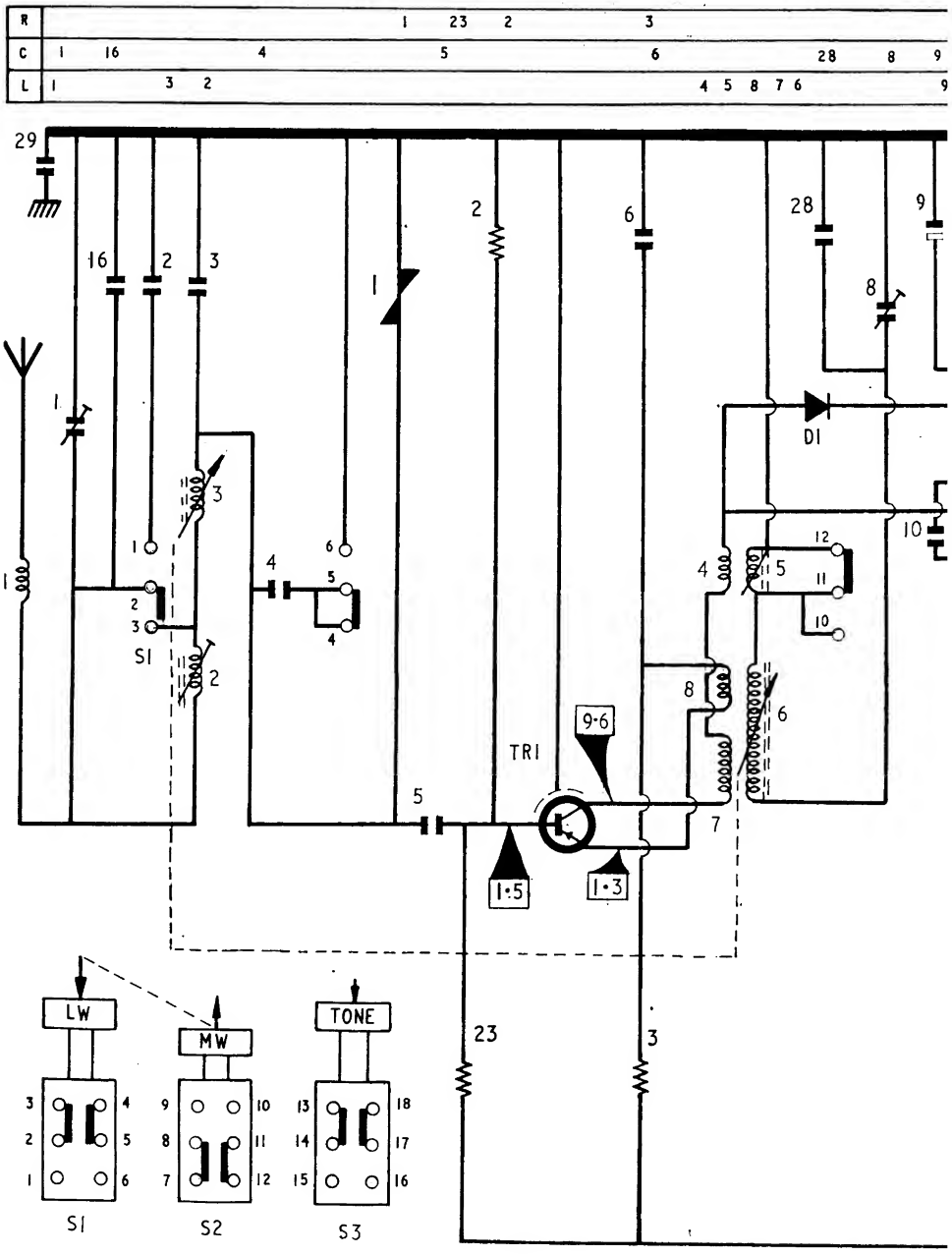
Installation kit supplied with the set will enable the receiver to be fitted to most cars. Individually styled kits are available for certain cars.

For detailed installation and suppression instructions see manual supplied with each set.

DISMANTLING

Outer cover plates. Top and bottom cover plates are secured by four screws. Top plate gives access to component side of the printed panel, bottom plate to the print side.

Access to components under the tuning assembly is obtained by releasing



the tuner unit bracket (two screws) from the front panel and moving the assembly aside to the limit of the connecting leads. Components under the volume control can be replaced by first removing front panel (see later section).

The cover plate carrying threaded mounting boss and polarity instructions is the bottom one.

Scale lamp. Access to scale lamp is obtained by removing top cover plate and withdrawing lamp holder from mounting tongue.

Front panel. Remove cover plates as described. Pull off volume and tuning knobs. Release two nuts holding scale. Remove scale and escutcheon. Release tuner bracket (two screws) and volume control bracket (two screws).

Remove two screws securing front

Continued overleaf

RESISTORS

R1	220K	B3
R2	68K	A3
R3	1K2	A3
R4	560	A3
R5	120K	A2
R6	390	A3
R7	390	B2
R8	1K	B2
R9	470	A2
R10	5K	B1
R11	10K	B1
R12	27K	B1
R13	5K6	B1
R14	2.2	B1
R15	470	B1
R16	2K2	B1
R17	120	A1
R18	120	A1
R19	120	A1
R20	12	A1
R21	130	A1
R22	0.51	A2
R23	12K	A3
R24	22K	A2
R25	180	A2
R26	470	B2

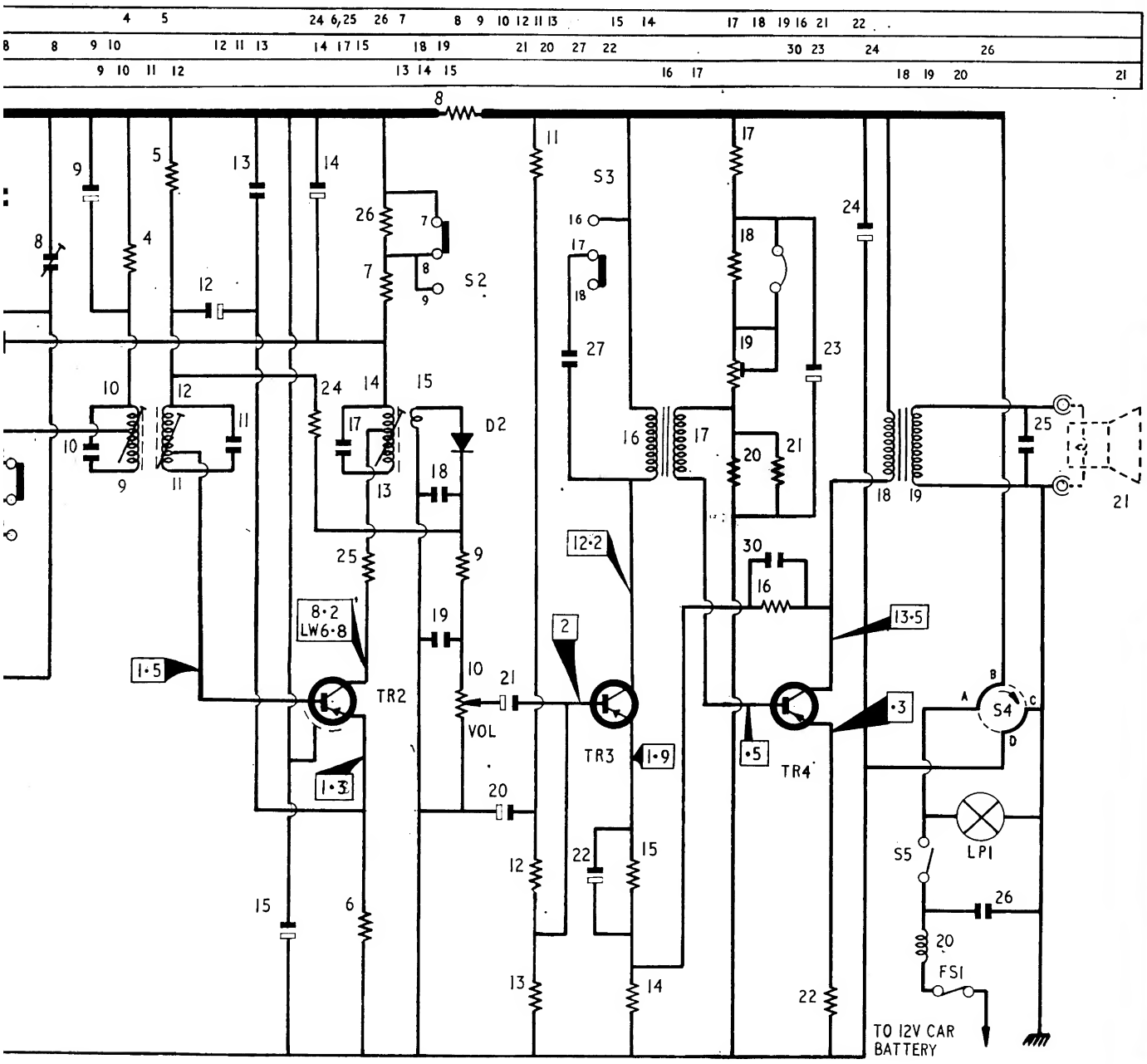
CAPACITORS

C1	80pF	A3
C2	2K2pF	AB3
C3	2K2pF	B3
C4	1K8pF	B3
C5	10KpF	A3
C6	100KpF	A3
C8	80pF	B3
C9	10mF	A3
C10	200pF	A2
C11	200pF	A2
C12	32mF	A2
C13	50KpF	A3
C14	32mF	A2
C15	125mF	B3
C16	22pF	A3
C17	200pF	A2
C18	10KpF	A2
C19	10KpF	B2
C20	4mF	B1
C21	4mF	B1
C22	125mF	A1
C23	25mF	A1
C24	1000mF	B2
C25	100KpF	A1
C26	220KpF	A1
C27	50KpF	B1
C28	22pF	B3
C29	50KpF	B3
C30	1K8pF	B1

TRANSISTOR VOLTAGES

No.	Type	Function	E	B	C
TR1	AF117	Mixer/osc	1.3	1.5	9.6
TR2	AF117	IF amplifier	1.3	1.5	8.2(6.8)
TR3	AC128	Driver	1.9	2.0	12.2
TR4	AD149	Output	0.3	0.5	13.5

Voltages are negative with respect to supply positive line. Readings taken with 100K/volt testmeter with receiver switched to MW, volume control at minimum, no signal input and supply voltage 14.5V DC.



panel to sides of outer casing. Ease front panel (complete with drive cord) forward to clear tuning and volume control spindles.

Printed panel. Remove cover plates and front panel as described. Release three screws on the print side of the panel holding it to the lugs on the outer casing. Unsolder leads from panel to trimmer (C1) and other components on back of casing. Printed panel can now be withdrawn. After reassembly pointer must be reset as described below.

SERVICE NOTES

Polarity switch. Circuit diagram shows polarity switch in positive earth position.

Pointer setting. Turn tuning control fully anti-clockwise (minimum inductance). Slide pointer along until in line with letter "O" of the word Tone.

R19 adjustment. Insert 0-1A meter between collector of TR4 and L18. Check supply voltage 14.5V. With no input signal adjust preset R19 for a reading of 0.48A ±12mA. Range of adjustment of R19 may be increased by bringing into circuit (or shorting out) series resistor R18.

Drive cord. Remove front panel as described. Detach pointer and old cord. Prepare new loop as shown in diagram. Fit new cord. Cores should be set in position of minimum inductance with tuning control full anti-clockwise. Cord should be wound 5½ times round the spindle of the tuning control.

ALIGNMENT

Equipment required. Modulated signal generator covering MW, LW and IF, output meter 5ohms (or AC voltmeter on 1V range), dummy aerial (see diagram), trimming tools.

If test gear or power supply is earthed it is essential for receiver polarity switch to be set for negative operation and the receiver chassis to be connected to the negative pole of the supply. Check that pointer is aligned correctly as described in Service Notes.

Connect output meter in place of speaker (or AC voltmeter across speaker). During alignment adjust generator input to maintain output meter reading at 50mW.

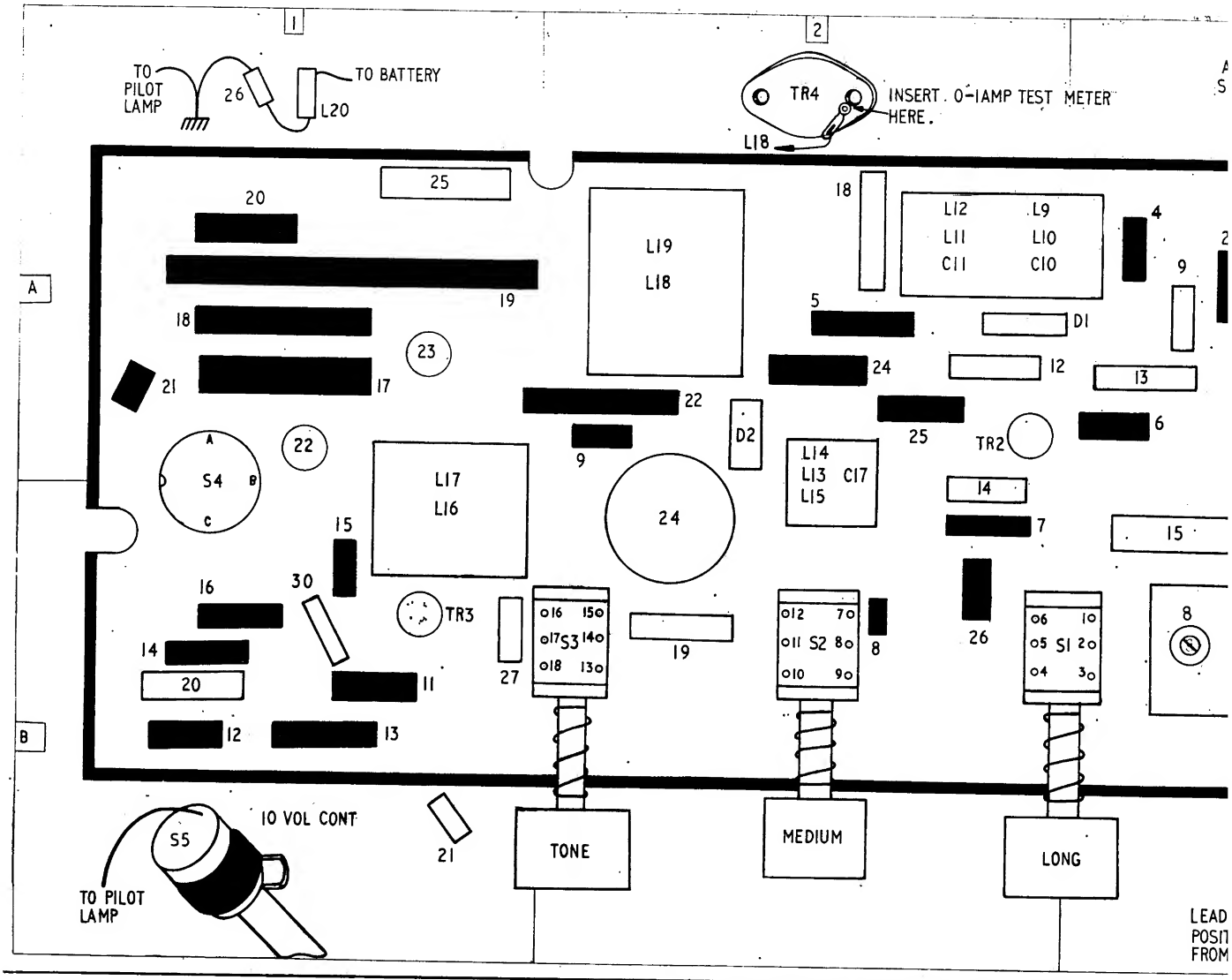
IF. Switch to MW. Set tone control to normal. Turn volume to maximum. Set tuning control fully anti-clockwise. Inject modulated signal at 480kc/s via dummy aerial to receiver input socket. Adjust L13/15, L11/12 and L9/10 in that order for maximum output.

If necessary L13/15 may first be trimmed with input signal applied to base of TR2. Repeat adjustments until no further improvement in output is obtained.

Oscillator and RF. Tuner assembly comprising L3, L6, L7, L8 and mechanical drive system is factory aligned as a unit and the adjustments should not be disturbed. In the event of a fault in alignment the complete unit must be replaced.

MW. Switch to MW. Turn tuning control fully clockwise. Inject modulated signal at 520kc/s to aerial socket via dummy aerial. Adjust C8 for maximum output. Change generator tuning to 1605kc/s and tune in signal on receiver. Adjust C1 for maximum output.

LW. Switch to LW. Turn tuning control to fully clockwise position. Apply modulated 148kc/s signal to aerial socket via dummy aerial. Trim L4/5 for maximum output. Change generator tuning to 190kc/s. Tune receiver to this signal. Trim L2 for maximum output.



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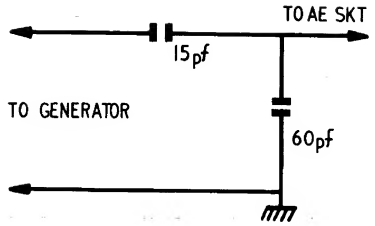

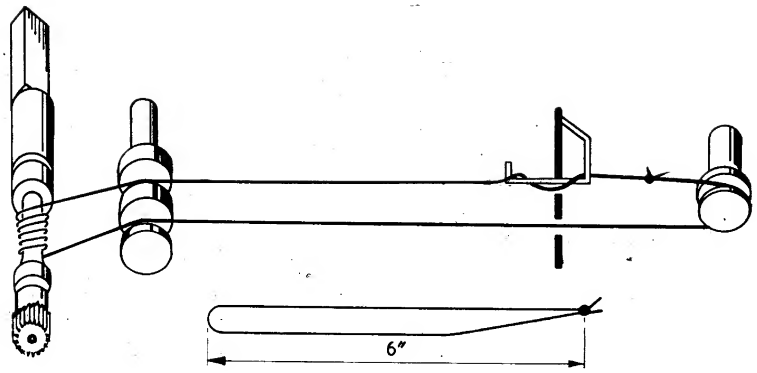

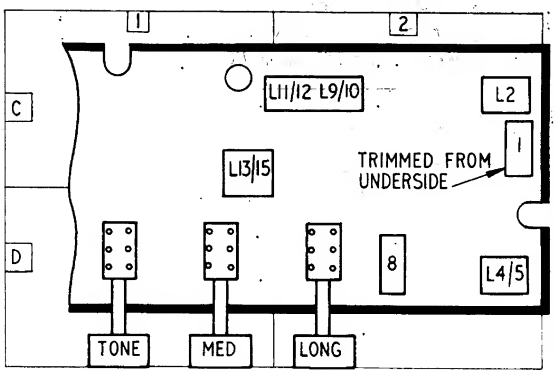

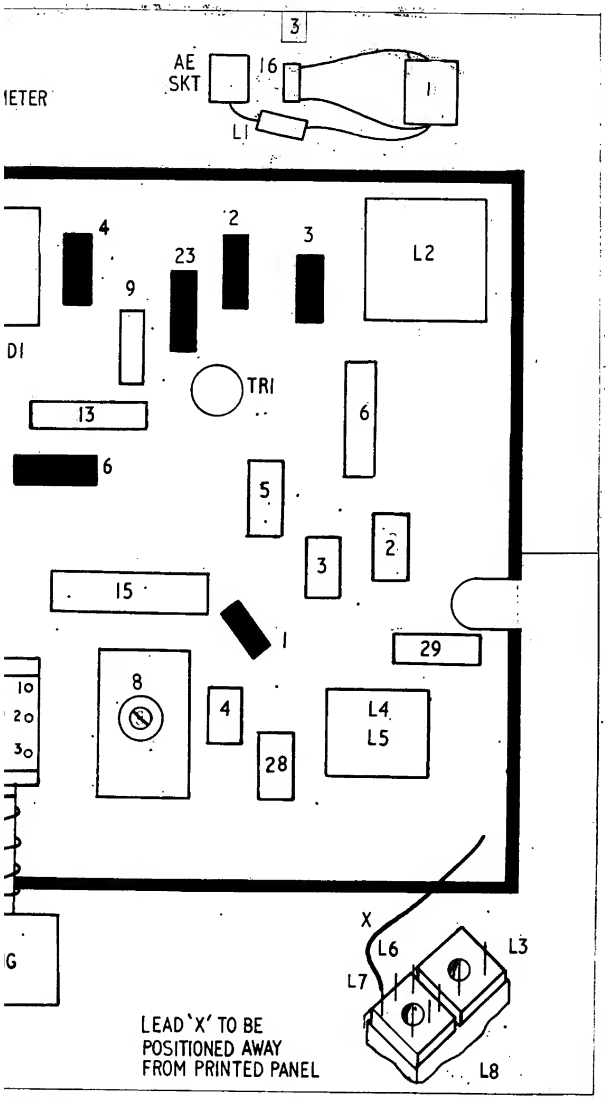

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